

Abstract of the Disclosure

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5 A method is proposed for etching a first silicon layer (15) that is provided with an etching mask (10) for defining lateral recesses (21). In a first plasma etching process, trenches (21') are produced in the region of the lateral recesses (21) by anisotropic etching. The first etching process comes virtually to a standstill as soon as a separating layer (12, 14, 14', 16), buried between the first silicon layer (15) and a further silicon layer (17), is reached. This separating layer is thereupon etched through in exposed regions (23, 23') by a second etching process. A subsequent third etching process then etches the further silicon layer (17, 17'). In this manner, free-standing structures for sensor elements can be produced in a simple process which is completely compatible with the method steps in IC integration technology.

Figure 6

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